

An Essay on Pleuritis.

Written by

A. Rex. of Pennsylvania.

Passed March 17<sup>th</sup> 1827  
W. L. H.

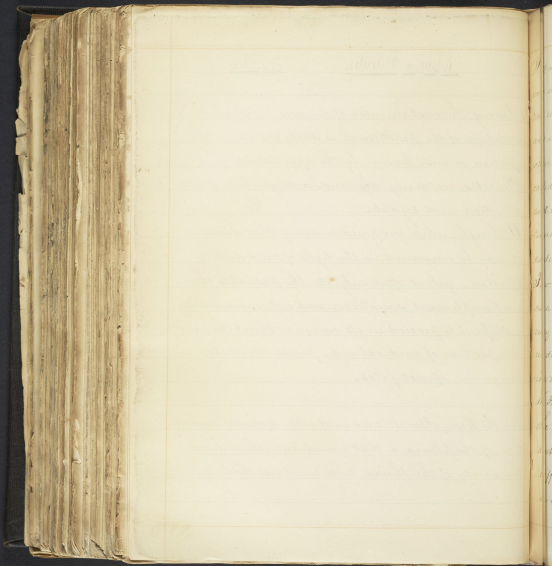
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Among the vast number of diseases to which the attention of the practitioner is daily called, that affection so well known by the appellation of Pleuritis, certainly demands a large share of our attention and regard.

Although, when compared to many other diseases, it may be considered in the light of an ordinary affection, yet, it often subjects the patient to the most unpleasant sensations, and not unfrequently, if suffered to proceed in its course, without the timely interposition of medical aid, proves extremely dangerous, if not fatal.

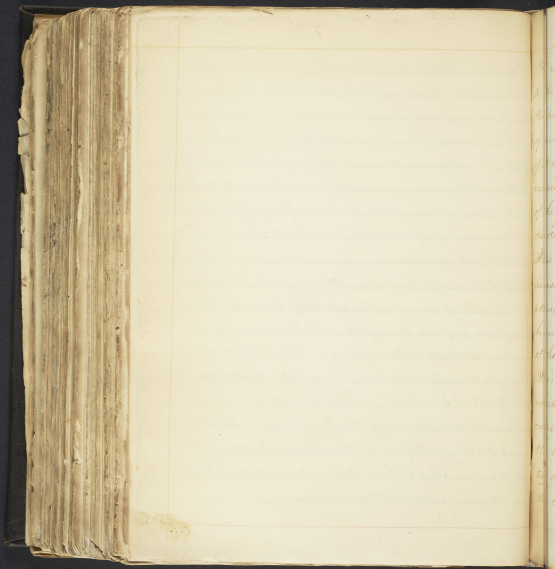
By the term Pleuritis we understand an inflammation of the pleura, or that membrane which lines the cavity of the thorax, and envelops the lungs.





By some of the older writers the diseases of the chest were named according to the part in which the affection was supposed to be seated, thus when the pleura was inflamed, the disease was called Pleuritis, when the inflammation was seated in the lungs, they called it *Pneumonia*, when in the heart, *carditis*, and even inflammation of the diaphragm, mediastinum, and pericardium, were by them considered as distinct diseases.

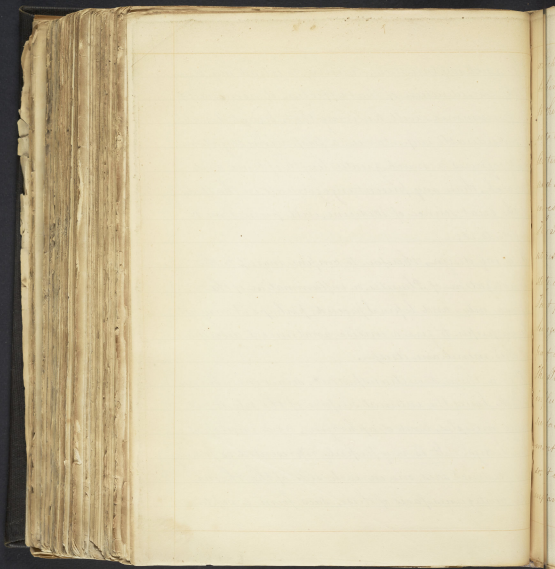
Two of the modern writers, however, treat *Pleuritis* as a distinct disease, it is generally believed, that it may very properly be classed with *Pneumonia*, under the head of *Pneumonia*. This method of classing the two affections has been adopted by Cullen, W. Philip of Edinburgh, and various others. The method adopted, by the Professors of the Institutes and Practice of Physic in this University, does not differ from that of the writers just mentioned, except in attaching two to *Pneumonia*.



It is not my intention, however, to extend my views to the consideration of that affection denominated Pneumonia, well knowing that, being a disease of considerable importance, a proper investigation of it requires a much greater length of time and research, than my present engagements, in the study of the great science of Medicine, will permit me to devote to it.

It is my design, therefore, to confine myself to the investigation of Pleuritis, or inflammation of the pleura only, and before I proceed, perhaps it may not be improper to give a concise anatomical description of this membrane itself.

It is a thin, semitransparent, serous membrane which lines the internal surface of the ribs, intercostal muscles, and diaphragm, and envelopes the lungs. It is very properly represented as forming two distinct sacs, one on each side of the thorax, the contiguous faces of these sacs form a septum,

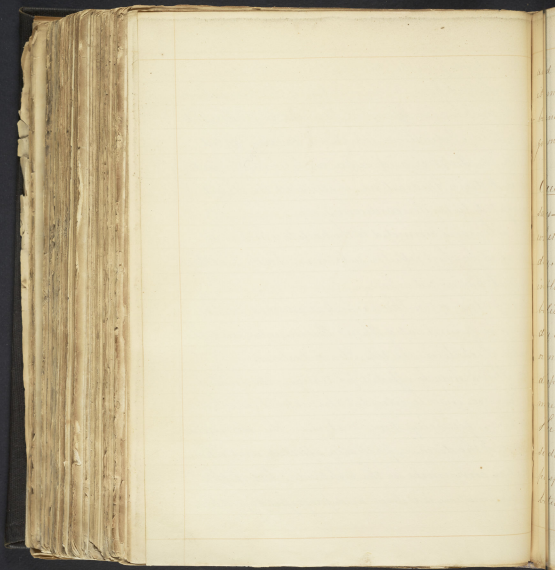


which extends from the sternum before, to the spine behind, and from the superior part of the thorax above to the diaphragm below. — This septum is divided into three Mediastina which are denominated Anterior, Posterior, and Superior. between the Anterior and Posterior Mediastina, is situated the Heart invested by its Pericardium.

The Pleura is connected to the parts to which it is attached by short cellular substance, In the healthy state it has no red vessels.

That portion of the Pleura which is attached to the lungs is denominated Pleura Pulmonalis, and that part which lines the ribs Pleura Costalis.

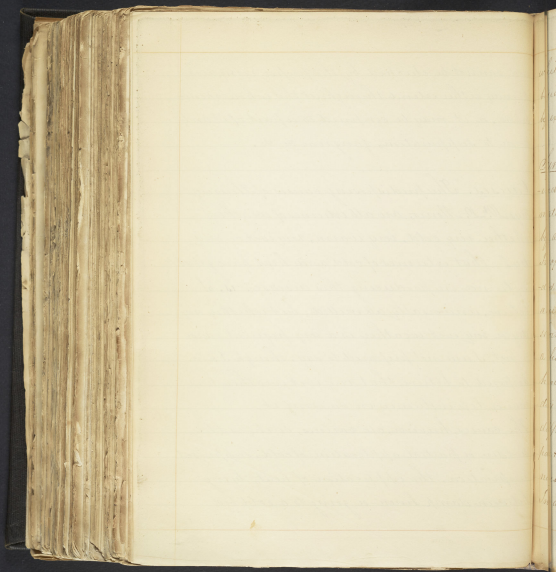
The Pleura may be affected partially, or the morbid influence may be extended throughout its whole surface, generally, however it is, in the commencement of the disease, partially affected, and when it is commonly in the right side, but if the inflammation is violent and progresses rapidly,



and cannot be checked by the proper remedies, it may either extend throughout the whole membrane, or it may be confined to a part of it and go on to suppuration, gangrene &c. &c.

Causes. "The predisposing causes of Pleurisy" says Mr. D. Memo, "are all extremes of weather, whether very cold, very warm, very wet or very dry," that extremes of cold and heat have great influence in producing this disease, is, I believe, universally admitted, but whether very dry or very wet weather is a very frequent cause or not, I am not prepared to say, though I am disposed to believe that very wet weather has more influence in causing it,

The causes, however, are various, such as the sudden or partial application of cold, suppressed perspiration, the application of heat, lying between damp linen or going to a cold bed.

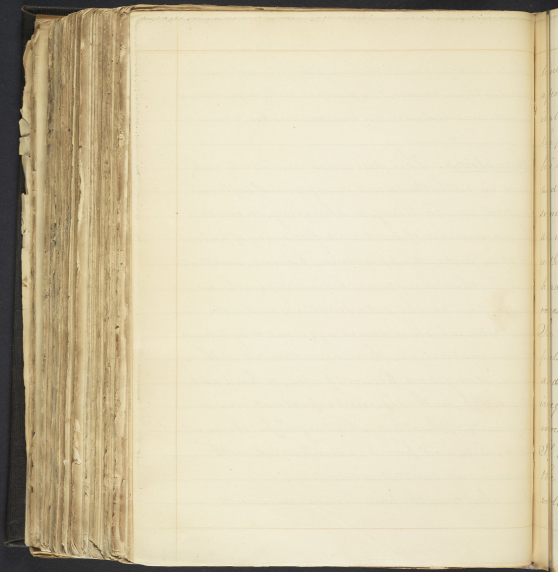




while in a purpuration is a very frequent cause,  
besides these causes, the disease may be produced  
by external violence in various modes.

Symptoms. This disease is commonly ushered in with the usual symptoms of inflammation viz. chilliness or shivering, succeeded by an increase of heat and frequency of pulse. It often makes its appearance, however, unattended by those symptoms, beginning with an acute pain in the side, sometimes under the shut ribs, which is much aggravated by taking a full inspiration, these are attended with a hard, strong, and frequent pulse, a hard and dry cough, with deficient expectoration, a difficulty of breathing, the tongue <sup>is</sup> for the most part white and furred, accompanied with nausea and sometimes vomiting.

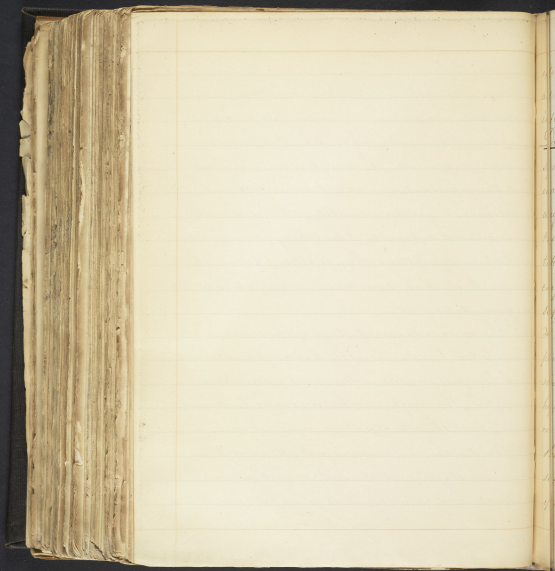
In a shut time the pain becomes more acute and



lancinating, and is increased by lying on the affected side. not infrequently there is an utter inability to remain in the recumbent posture, the patient being obliged to sit up and have his body supported, the cough is more violent, and the expectoration still deficient though sometimes in greater quantity, attended with an increased difficulty of breathing, connected with these symptoms there is often pain in the head which is in some cases so violent as to occasion delirium.

In the more advanced stage of the disease, the pulse often loses some of its hardness and strength, and becomes weaker, softer, and sometimes irregular, the cough also becomes more loose and moist, and the expectoration more copious.

If the disease, however, is not attended to in the early stage, and the inflammation runs on violently and rapidly, it is very apt soon to

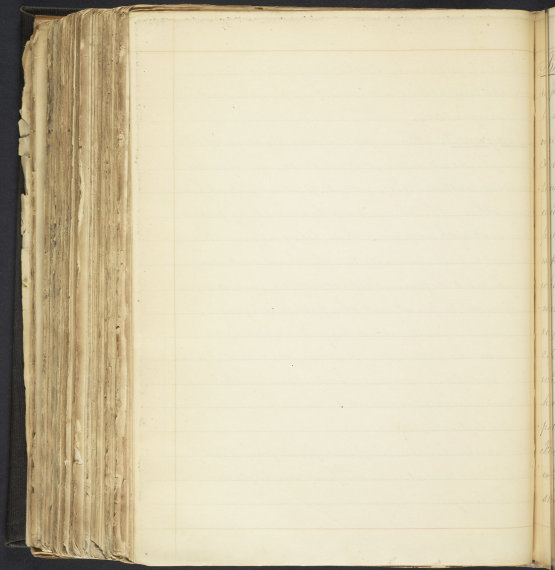


extend its influences to the lungs, and induce all the symptoms attendant on pneumonia inflammation.

Diagnosis. By a proper investigation of the symptoms attending this disease, we may be enabled without difficulty to distinguish it from any other, the sharp and lancinating pains, the seat of those pains, their being aggravated by taking a full inspiration, the hard and dry cough, and deficient expectoration, are amply sufficient to point out the proper diagnosis.

It may be distinguished from pleuritis by the pain in the latter affection, being dull and oppressive, and being increased by pressure in the right hypochondriac region, and by the difficulty in lying on the left side.

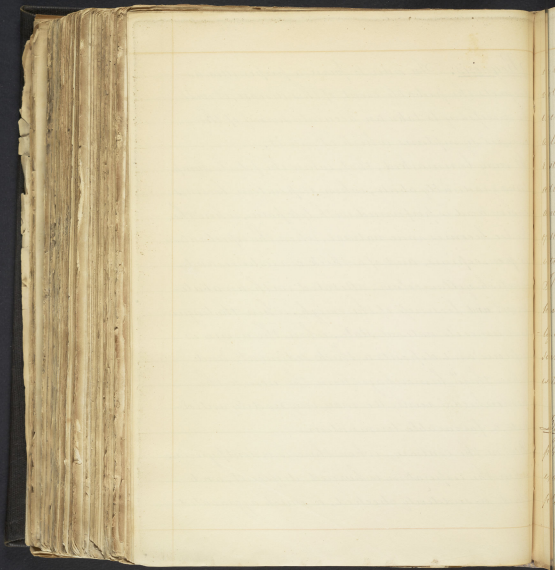
The acute, lancinating and fixed pains, will be sufficient to distinguish <sup>it</sup> from an inflammation of the lungs.



Prognosis. In order to form a proper idea as respects the probable event of this disease, it will be necessary to take an accurate survey of the various symptoms which attend it,

It may be remarked, that, when the febrile symptoms gradually abate, when respiration becomes easier and is performed with less pain, when the pulse becomes more natural, when the expectoration is free, copious, and of a thick consistence, and whitish yellow colour, attended with an abatement and looseness of the cough, when the tongue resumes its natural state, when the urine is copious and deposits a thick sediment, and when there is hemorrhage from the nose or the hemorrhoidal veins, we may very readily anticipate a favourable termination.

But in the contrary, when there is violent pyrexia, when the respiration is hurried, difficult, and short, a suddenly checked, a much aggravated

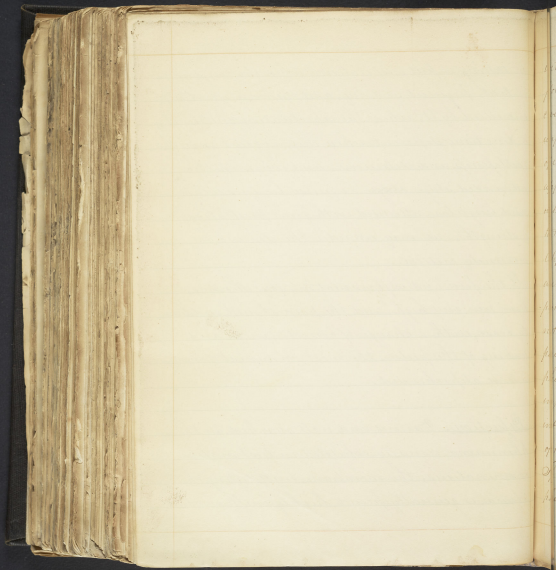




on taking a full inspiration, when the cough is violent, frequent, and dry, and the pain greatly increased by it, when the expectoration continues a long time deficient, when there is great anxiety, restlessness, and delirium, and when in the advanced stage ~~stage~~ the pulse becomes weak and irregular, attended with great prostration of strength, we may consider the disease as extremely critical.

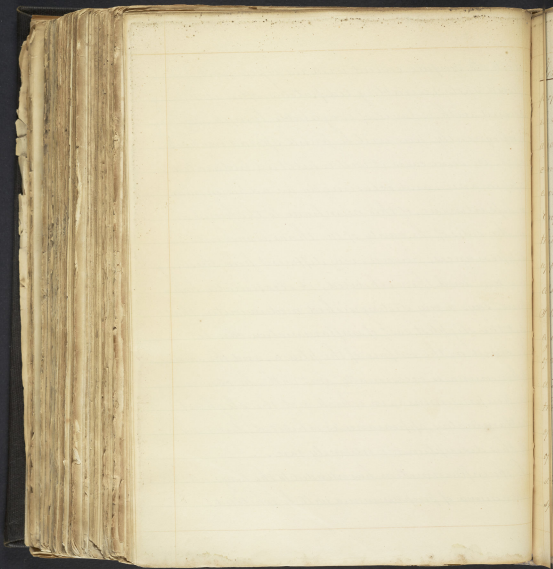
If the fever and inflammation, says Thomas, have run very high, and the pain should suddenly cease, with a change of countenance, and sinking of the pulse, the most imminent danger is to be apprehended.

Dissection. Various and well marked are the phenomena usually exhibited in post mortem examinations, the membrane, constituting the pleura, is generally found highly inflamed,



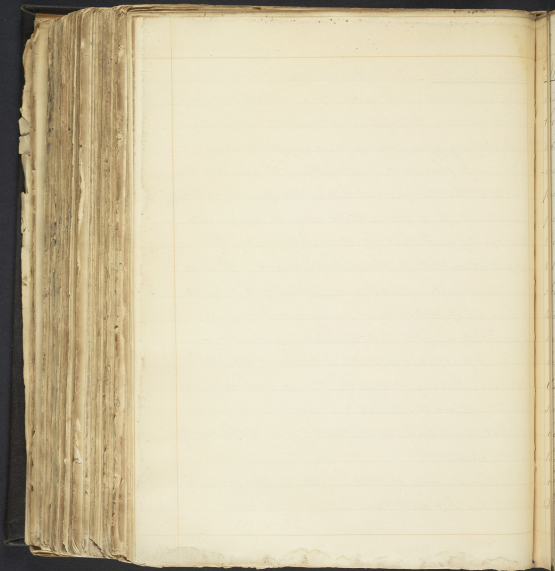
with its surface covered with red vessels and  
flood spots resembling red patches, often it is  
covered with a layer of coagulable lymph, not  
unfrequently pus will be found spread over parts  
of it, in some cases it will exhibit an indurated  
appearance, and occasionally an adhesion, more  
or less extensive, of this membrane to the lungs or  
to the sides of the cavity of the thorax, is met with.  
Appearances, however, very different from these,  
are now and then exhibited, it occasionally hap-  
pens, says a very distinguished modern writer, that  
not the slightest east of inflammation can be  
perceived on the surface of the pleura, and the same  
phenomena is occasionally met with, he observes,  
in peripneumonia, in which not the slightest  
inflammatory appearance is exhibited, but cases  
of this description are extremely rare.

If the inflammation has extended to the lungs, all the  
phenomena of peripneumonia will be exhibited.

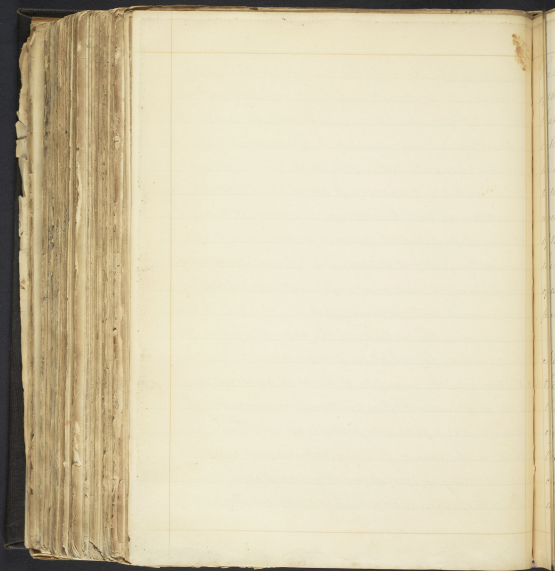


Termination. An inflammation of the pleura, if properly treated in the early stage, generally terminates in resolution, but if it is not arrested in this stage, and its progress is very rapid, a suppuration is commonly the result, and matter is thrown into the cavity of the thorax, constituting the disease called Empyema, & a serous fluid may be effused into this cavity and that affection, known by the appellation of Hydrothorax, be produced. It may also terminate in adhesion, a case of this kind, I had an opportunity of seeing about two years ago, while assisting at the examination of a boy of about fourteen years old, who died of another disease, having opened the thorax, and examined the pleura, we discovered an extensive adhesion of that membrane to the right side of the cavity of the chest.

This disease may also terminate in gangrene, or phacelus, but such cases are extremely rare.



Treatment. As respects the treatment of this disease, the propriety of a rigid enforcement of the antiphlogistic plan, is, I believe, universally admitted. Knowing it to be of an highly inflammatory character, attended with the most acute pain, and great uneasiness about the thorax, no practitioner can hesitate, for a moment, to adopt the most proper and decisive means, in order to relieve his patient of such distressing symptoms. The principal and most important indication is, to diminish inflammatory action, this is to be done by reducing the violence of the arterial system, the best remedy for which is Venesection. As respects the quantity of blood to be drawn, some difference of opinion has prevailed, but I believe it is a fact now pretty well established, that for the cure of Pleurisy, copious and repeated bloodletting is indispensably necessary. It is the opinion of our highly respected Professor of



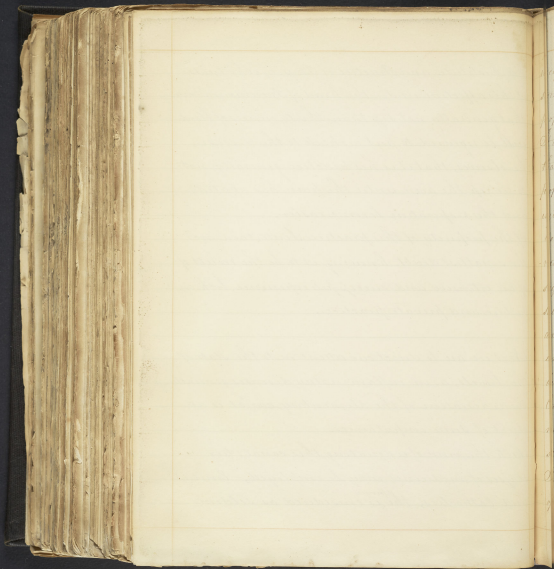


The Institutes and Practice of Physic, who treats of this affection under the head of Pneumonia, that generally not less than thirty ounces of blood will be required to put a check to the disease, he observes, that it is his practice generally, not to tie up the arm until the pain has abated, and the respiration become easier.

Of the propriety of this practice I entertain not the smallest doubt. Knowing it to be the result of an extensive and successful experience, both in public and private practice.

Next we are to direct our attention to the state of the bowels, as in inflammatory diseases generally, the evacuation of the alimentary canal is an object of some importance.

With the view of evacuating this canal, two classes of medicines may be employed, - Emetics and cathartics, the <sup>former</sup> is considered as seldom

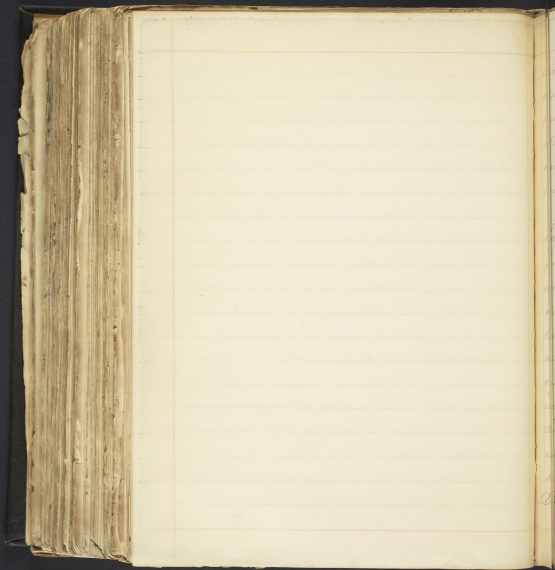


necessary, except in particular conditions of the stomach, consequently Cathartics are the most proper and hence should be preferred.

It appears to be the opinion of writers generally, that the mildest articles of this class are the most proper. Thomas observes, that strong purging is injurious, as it tends to determine the flow of blood to the internal parts, and thereby aggravate instead of alleviating the symptoms, but, says he, mild Laxatives, such as the Neutral salts and Manna, either alone or combined with an infusion of Senna, and the occasional use of emollient Clysters, will be found to prove very beneficial.

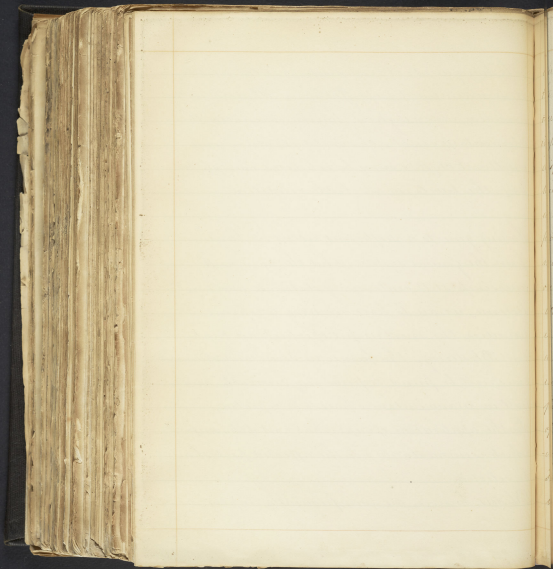
Caldwell, also, recommends the employment of mild Laxatives and Clysters in preference to the stronger cathartics.

In some instances, however, particularly in cases of obstinate costiveness, the more drastic articles X



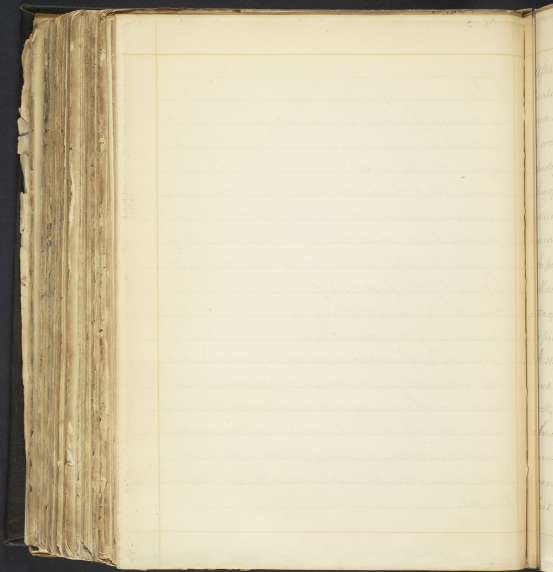
will be required, it is in such that Calomel  
alone or combined with Jalap, or Rhubarb, will  
prove very advantageous, having evacuated the  
alimentary canal, the mild laxatives and  
unobtrusive clysters may be exhibited in order to  
keep the bowels in a soluble condition.

Having gone to a sufficient extent in bleeding  
from the general system, and the pain and  
uneasiness still continuing obstinate and trou-  
blesome, we are to have recourse to topical  
remedies, the most useful of which are Cupping  
and Blistering, the former, in severe and obstinate  
cases, will be found to prove very serviceable, and  
will in many instances have to be repeated.  
In the application of cups, that part of the surface  
which is immediately over the affected part, should  
be selected.  
Blisters, however, are more frequently employed,



and generally answer a very salutary purpose, the application of a large blister immediately over the affected part commonly proves a most important remedy and in many cases cannot be dispensed with. — It occasionally happens, however, that the blister heals up too soon, and as a consequence, little or no effect has been produced by it, when this is the case, it will be necessary to apply a second as near the part occupied by the first as possible,

When the pain is trifling, or when the patient is unwilling to submit to the application of a blister, a Sinapium may be substituted with advantage, or warm applications, as flannel cloths wrung out in a warm decoction of some emollient herbs, or a bladder containing warm water, or a bag filled with hot sand, may often be employed with considerable benefit.

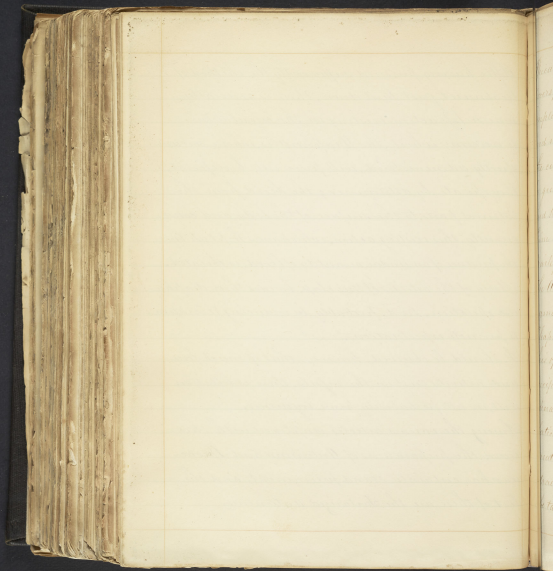




After having pursued sufficiently the method of treatment just laid down, there is generally more or less action existing in the circulation to evacuate which, the Diaphoretics, when circum-spectly administered, will prove very beneficial, they operate by determining the blood from the internal parts, to the surface of the body, and consequently this existing action, which was kept up by the presence of an undue quantity of blood, is obviated. Many of the articles of this class, besides their diaphoretic operation, tend, probably, by inducing relaxation, to promote expectoration.

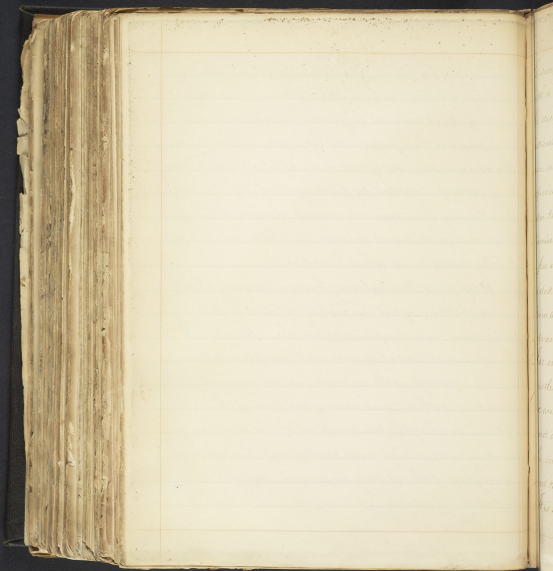
It should be observed, however, that if much force and activity exist in the vessels, their exhibition will, in all probability, prove injurious.

Among the various articles employed with this view, the preparations of Antimony and Specacuanha, certainly stand preeminent, and the best of these are the Tartarized Antimony.



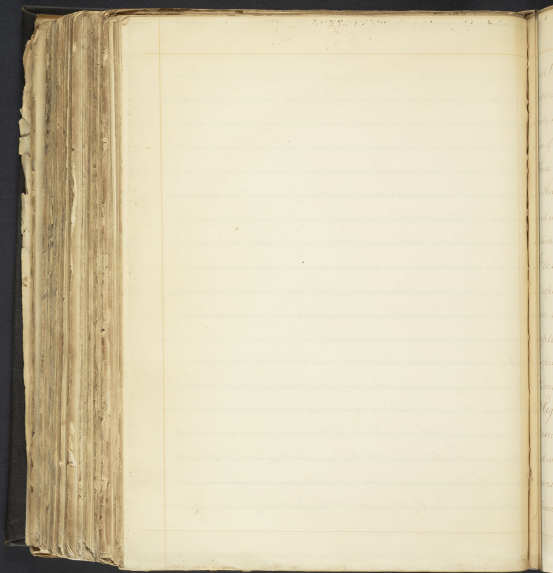
*Spica uanba atom*, the Continental powders, and  
Peters powders. When either of these remedies is  
employed, it should be given in small doses,  
and more or less frequently repeated, according to  
the circumstances of the case, their operation may  
be greatly promoted by putting the patient in bed,  
and having him warmly covered, and by giving  
him warm diluent drinks as chamomile tea,  
Barley water and other herb teas.

The *Asclepias Decumbens*, known also by the  
name of *Plumby root*, is highly extolled by Joseph  
Chapman, as a Diaphoretic in this affection. It is  
his opinion that it is very well adapted to the  
incipient stage of the disease, in consequence of its  
operating without increasing the force of the circu-  
lation, raising the temperature of the surface, or  
creating uneasiness and restlessness. — copious  
draughts of the strong infusion, says he, may  
be taken repeatedly.



As soon as the cough becomes loose, and is attended with a copious discharge of a thick yellowish matter, the disease may be considered as broken, and the patient about to recover. — but when this is not the case, and the cough continues hard and dry, with deficient expectoration, something must be done in order to obviate these symptoms. with a view to diminish the violence of the cough and to promote a free expectoration, the various cough mixtures, aided by warm demulcent drinks, as Barley water, Gum arabic water, and Flaxseed tea, may be very advantageously employed.

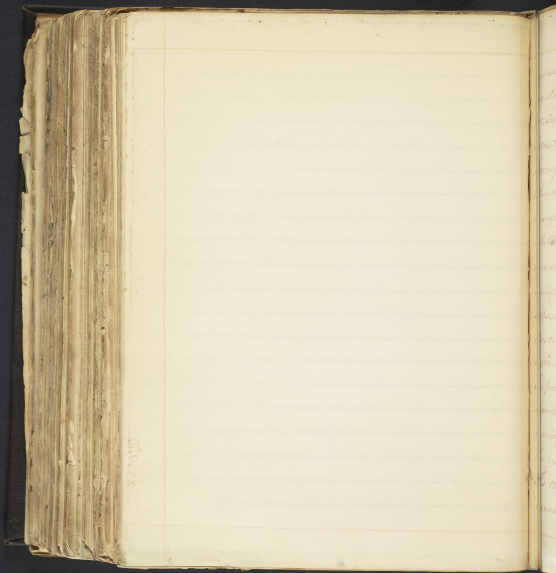
In many cases, however, we cannot, by such gentle means, promote expectoration sufficiently, we are then to have recourse to more active remedies, and among those which appear to have acquired the most celebrity, the *Virgata* or *Oryzoid* of *Spittle*, and the *Polygala Senega* stand very conspicuous. It is said by Cullen, that the Sarsaparilla, Antimony,



and Antivenereal <sup>remedies</sup> are preferable to any others, that the latter is serviceable. I do not hesitate to believe, particularly in the milder forms, as it enters into the composition of many of the most useful cough-mistures.

These remedies also, as I said before, may be assisted in their operation by warm Mucilaginous beverages, and what is very useful, by the inhalation of the steam of warm water impregnated with vinegar. It is necessary, however, to observe, that the exhibition of expectorants should be withheld until the system has been sufficiently reduced by previous depletion; this is particularly important, as respects the Squill and Seneka, which are of a stimulating character.

Regimen. Respecting the most proper diet in these diseases, very little need be said. It is very generally admitted that in all inflammatory affections, the lowest and least stimulating articles should be given; the same certainly holds good in the

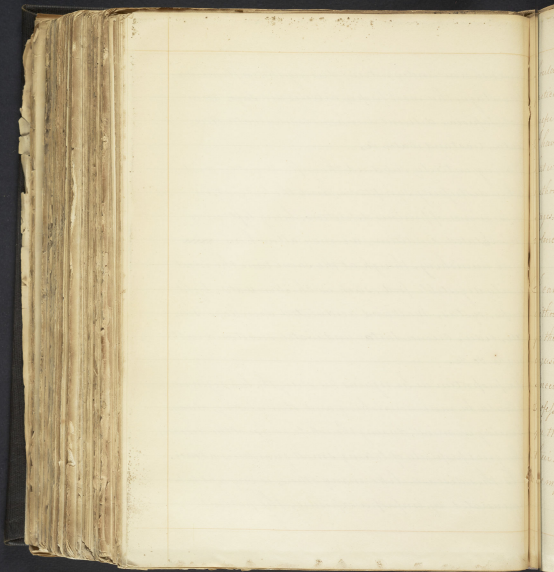




disease now under notice, during the inflammatory stage, the most proper articles are sage, arrow-  
root, Saffron, diluent drinks, as barley water, rice  
water, toast and water &c.

Having entirely subdued the inflammatory and  
other distressing symptoms, and the patient, in  
consequence of previous depletion, being left in a  
debilitated condition, we may allow him ~~more~~  
more nourishing, though at the same time the most  
easily digestible food, such as chicken water, light  
soups, pastas, Malt and acidulated drinks, as beer,  
ale, cider, Brown Saffar and water sweetened with  
sugar &c. &c.

In proportion as he regains his strength, his regimen  
should be more nourishing and stimulating, always  
bearing in mind, during the whole course of the disease,  
the great propriety of taking small quantities at once.  
As this disease, like many others, is very apt to be  
regenerated by improper exposure, the patient

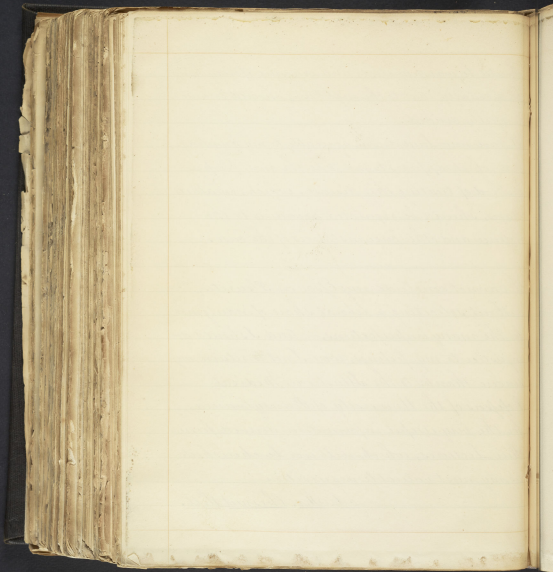


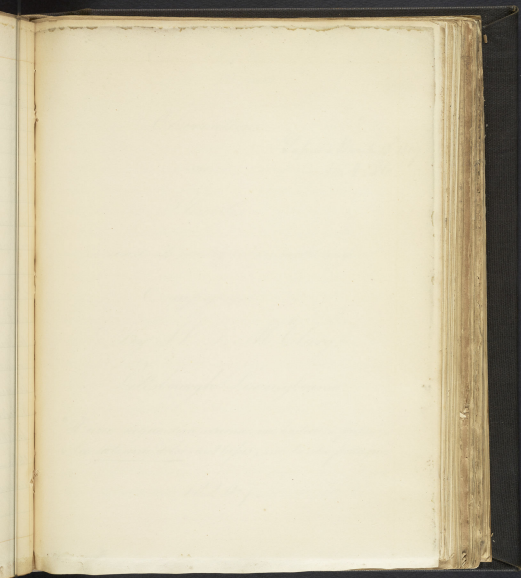
should be warmly clad, and exposure of every kind particularly that to the night air, should be very carefully avoided.

I have now laid down, agreeably to my knowledge, that which appears to me to be the most proper method of treating this disease, which, in all its stages, should be regulated according to the violence and other circumstances of the case.

I cannot conclude my Essay on Pleuritis, without soliciting a liberal share of indulgence for the many imperfections, — and I should do injustice to my feelings, were I not to return my sincere thanks to the Illustrious Medical Professors of the University of Pennsylvania, for the very useful information derived from their Lectures, which will ever be cherished as my most valuable acquisition.

C. R. Chesnut M.D.





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The House